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TROY M. SCHMELZER
HOGAN & HARTSON L.L.P.
500 SOUTH GRAND AVENUE
SUITE 1900
LOS ANGELES, CA 90071

EXAMINER	
AGHDAM, FRESHTEH N	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,100	SIADAT ET AL.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10, 12-14, 16-23, 25, and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10, 12-14, 16-23, 25, and 27-29* is/are rejected.

7)☒ Claim(s) *30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/18/2006 has been entered.

Response to Arguments

Applicant's arguments, see page 9, filed 8/18/2006, with respect to the rejection(s) of claim(s) 1-29 under Kubo (US 4,896,349), further in view of Fawal (US 6,452,938) and Yamano (US 6,597,768) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yamano et al (US 6,597,768), further in view of the instant application's disclosed prior art and Kubo et al (US 4896349).

Claim Objections

Claims 1 and 30 are objected to because of the following informalities:

As to claim 1, line 11 the phrase "the first output coil" should be replaced by "the second output coil".

As to claim 30, line 12, the phrase "the first output coil" should be replaced by "the second output coil".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 10, 12-14, 16-23, 25, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamano et al (US 6,597,768), further in view of the instant application's disclosed prior art and Kubo et al (US 4896349).

As to claims 1-2, 6-8, Yamano disclose a first transceiver circuit that operates at a first frequency band (i.e. DSL modem codec IC; Fig. 13, means 136 since the DSL modem operates in the frequency range of 20 KHz to 1.1 MHz see Fig. 2); a second transceiver circuit that operates at a second frequency band (i.e. Phone line Networking Transceiver; Fig. 13, means 130 since the HPNA operates in the frequency range of 4 MHz to 10 MHz) and are connected to an interface coupler (i.e. RJ-11; Fig. 13, means

134). Yamano further discloses that the Phone line Networking transceiver is coupled to an integrated transformer (Fig. 11, means 140; Fig. 12b, T1) and the transformer T1 is coupled to the interface coupler (i.e. RJ-11) and a signal source (Fig. 1d, central office), wherein the transformer T1 includes a coil and an input coil and an output coil. Yamano is not explicit about placing bandpass filters between the output coil(s) and the first and second transceivers; placing a transformer between the interface coupler (RJ-11) and the DSL modem transceiver and, wherein the transformer has a first and second output coils that the first output coil is coupled to the first transceiver and the second output coil is coupled to the second transceiver. One of ordinary skill in the art would clearly recognize that it is well known in the art to employ a bandpass filter to only pass a particular frequency range and attenuating the rest of the frequency spectrum; therefore, reducing noise and enhancing the system performance. The instant application's disclosed prior art discloses that the first and second transceivers each require a transformer between the transceiver circuitry and an input jack (RJ-11), wherein the transformer provides isolation between the transceiver circuitry and the input jack and isolation protects the transceiver circuitry from high voltage spikes (Par. 5-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of the instant application's disclosed prior art with Yamano for the reason stated above. Kubo disclose a home bus system utilizing one transformer (Fig. 2, means 25) with two output coils (25b and 25c) instead of two transformers (Fig. 1, means 6-7) each with one output coil to couple the first (Fig. 1-2, means 8 or 9) and second transceivers (Fig. 1-2, means 10 or 11). Therefore, it would have been obvious

to one of ordinary skill in the art to combine the teaching of Kubo with Yamano and the instant application's disclosed prior art in order to reduce the number of components used in a system and as the result simplifying the system by using one transformer with two output coils than two transformers each with one output coil (Col. 1, Lines 12-20).

As to claims 3-4, Yamano teaches a transformer circuit coupled to a codec, where the codec may be a LAN modem or a home phone line network alliance (HPNA) specifications for a LAN codec (Yamano, Col. 1, Lines 39-50, Fig. 1c, 1d, and 11). One of ordinary skill in the art would clearly recognize that it is well known in the art that LAN and home LAN allow more data to be transmitted at higher frequencies and larger bandwidths in communication systems. Therefore, it would be obvious to one of ordinary skill in the art that the second transceiver as taught by Kubo be modified to include a LAN or a home LAN codec, in order to allow data to be transmitted at higher frequencies and larger bandwidths in communication systems.

As to claim 5, Kubo teaches a single core (figure 2, 25), wherein the single core is configured to operate in a plurality of frequency ranges (column 2, lines 19-33).

As to claims 10, 12-14, 16-21, Yamano disclose a first transceiver circuit that operates at a first frequency band (i.e. DSL modem codec IC; Fig. 13, means 136 since the DSL modem operates in the frequency range of 20 KHz to 1.1 MHz see Fig. 2); a second transceiver circuit that operates at a second frequency band (i.e. Phone line Networking Transceiver; Fig. 13, means 130 since the HPNA operates in the frequency range of 4 MHz to 10 MHz) and are connected to an interface coupler (i.e. RJ-11; Fig.

13, means 134). Yamano further discloses that the Phone line Networking transceiver is coupled to an integrated transformer (Fig. 11, means 140; Fig. 12b, T1) and the transformer T1 is coupled to the interface coupler (i.e. RJ-11) and a signal source (Fig. 1d, central office), wherein the transformer T1 includes a coil and an input coil and an output coil. Yamano is not explicit about placing bandpass filters between the output coil(s) and the first and second transceivers; placing a transformer between the interface coupler (RJ-11) and the DSL modem transceiver and, wherein the transformer has a first and second output coils that the first output coil is coupled to the first transceiver and the second output coil is coupled to the second transceiver. One of ordinary skill in the art would clearly recognize that it is well known in the art to employ a bandpass filter to only pass a particular frequency range and attenuating the rest of the frequency spectrum; therefore, reducing noise and enhancing the system performance. One of ordinary skill in the art would clearly recognize that utilizing integrated circuits to reduce the size of the circuit are well known in the art as evidenced by Yamano (Col. 5, Lines 51-60; Fig. 4-5, CODEC IC). Yamano teaches a transformer circuit coupled to a codec, where the codec may be a LAN modem or a home phone line network alliance (HPNA) specifications for a LAN codec (Yamano, Col. 1, Lines 39-50, Fig. 1c, 1d, and 11). One of ordinary skill in the art would clearly recognize that it is well known in the art that LAN and home LAN allow more data to be transmitted at higher frequencies and larger bandwidths in communication systems. Therefore, it would be obvious to one of ordinary skill in the art that the second transceiver as taught by Kubo be modified to include a LAN or a home LAN codec, in order to allow data to be transmitted at higher

frequencies and larger bandwidths in communication systems. The instant application's disclosed prior art discloses that the first and second transceivers each require a transformer between the transceiver circuitry and an input jack (RJ-11), wherein the transformer provides isolation between the transceiver circuitry and the input jack and isolation protects the transceiver circuitry from high voltage spikes (Par. 5-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of the instant application's disclosed prior art with Yamano for the reason stated above. Kubo disclose a home bus system utilizing one transformer (Fig. 2, means 25) with two output coils (25b and 25c) instead of two transformers (Fig. 1, means 6-7) each with one output coil to couple the first (Fig. 1-2, means 8 or 9) and second transceivers (Fig. 1-2, means 10 or 11). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kubo with Yamano and the instant application's disclosed prior art in order to reduce the number of components used in a system and as the result simplifying the system by using one transformer with two output coils than two transformers each with one output coil (Col. 1, Lines 12-20).

As to claim 22, Kubo teaches a transformer circuit comprising an input coil coupled to a signal source, a first output coil coupled to a first transceiver circuit, and a second output coil coupled to a second transceiver circuit, wherein the single core is configured to operate in a plurality of frequency ranges (Fig. 2, means 25, 25a, 25b, and 25c).

As to claims 23 and 28, Yamano disclose a first transceiver circuit that operates at a first frequency band (i.e. DSL modem codec IC; Fig. 13, means 136 since the DSL

modem operates in the frequency range of 20 KHz to 1.1 MHz see Fig. 2); a second transceiver circuit that operates at a second frequency band (i.e. Phone line Networking Transceiver; Fig. 13, means 130 since the HPNA operates in the frequency range of 4 MHz to 10 MHz) and are connected to an interface coupler (i.e. RJ-11; Fig. 13, means 134). Yamano further discloses that the Phone line Networking transceiver is coupled to an integrated transformer (Fig. 11, means 140; Fig. 12b, T1) and the transformer T1 is coupled to the interface coupler (i.e. RJ-11) and a signal source (Fig. 1d, central office), wherein the transformer T1 includes a coil and an input coil and an output coil. Yamano is not explicit about placing bandpass filters between the output coil(s) and the first and second transceivers; placing a transformer between the interface coupler (RJ-11) and the DSL modem transceiver and, wherein the transformer has a first and second output coils that the first output coil is coupled to the first transceiver and the second output coil is coupled to the second transceiver. One of ordinary skill in the art would clearly recognize that it is well known in the art to employ a bandpass filter to only pass a particular frequency range and attenuating the rest of the frequency spectrum; therefore, reducing noise and enhancing the system performance. One of ordinary skill in the art would clearly recognize that utilizing integrated circuits to reduce the size of the circuit are well known in the art as evidenced by Yamano (Col. 5, Lines 51-60; Fig. 4-5, CODEC IC). Yamano teaches a transformer circuit coupled to a codec, where the codec may be a LAN modem or a home phone line network alliance (HPNA) specifications for a LAN codec (Yamano, Col. 1, Lines 39-50, Fig. 1c, 1d, and 11). One of ordinary skill in the art would clearly recognize that it is well known in the art that LAN

and home LAN allow more data to be transmitted at higher frequencies and larger bandwidths in communication systems. Therefore, it would be obvious to one of ordinary skill in the art that the second transceiver as taught by Kubo be modified to include a LAN or a home LAN codec, in order to allow data to be transmitted at higher frequencies and larger bandwidths in communication systems. The instant application's disclosed prior art discloses that the first and second transceivers each require a transformer between the transceiver circuitry and an input jack (RJ-11), wherein the transformer provides isolation between the transceiver circuitry and the input jack and isolation protects the transceiver circuitry from high voltage spikes (Par. 5-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of the instant application's disclosed prior art with Yamano for the reason stated above. Kubo disclose a home bus system utilizing one transformer (Fig. 2, means 25) with two output coils (25b and 25c) instead of two transformers (Fig. 1, means 6-7) each with one output coil to couple the first (Fig. 1-2, means 8 or 9) and second transceivers (Fig. 1-2, means 10 or 11). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kubo with Yamano and the instant application's disclosed prior art in order to reduce the number of components used in a system and as the result simplifying the system by using one transformer with two output coils than two transformers each with one output coil (Col. 1, Lines 12-20).

As to claim 25, Yamano teaches a transformer circuit coupled to a codec, where the codec may be a LAN modem or a home phone line network alliance (HPNA) specifications for a LAN codec (Yamano, Col. 1, Lines 39-50, Fig. 1c, 1d, and 11). One

of ordinary skill in the art would clearly recognize that it is well known in the art that LAN and home LAN allow more data to be transmitted at higher frequencies and larger bandwidths in communication systems. Therefore, it would be obvious to one of ordinary skill in the art that the second transceiver as taught by Kubo be modified to include a LAN or a home LAN codec, in order to allow data to be transmitted at higher frequencies and larger bandwidths in communication systems.

As to claim 29, Kubo teaches a transformer circuit comprising an input coil coupled to a signal source, a first output coil coupled to a first transceiver circuit, and a second output coil coupled to a second transceiver circuit, wherein the single core is configured to operate in a plurality of frequency ranges (Fig. 2, means 25, 25a, 25b, and 25c; Col. 2, Lines 29-33).

Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamano et al (US 6,597,768), the instant application's disclosed prior art, and Kubo et al, further in view of Fawal et al (US 6,452,938).

As to claims 9 and 27, Yamano, the instant application's disclosed prior art, and Kubo teach all the subject matter claimed in claims 7 and 23, except for the communication circuit further comprising a substrate having the transformer and the first and second bandpass filters disposed thereon. Fawal teaches a transformer coupled to a filter, disposed on a substrate (Fawal, column 11, line 57- column 12, line 2., figure 10). It is well known in the art that a substrate used to dispose various components thereon, in order to minimize space and cost of components. Therefore, it would be

obvious to one of ordinary skill in the art at to combine the teaching of Fawal with Yamano, the instant application's disclosed prior art, and Kubo for the reason stated above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh Aghdam
October 20, 2006

KEVIN BURD
PRIMARY EXAMINER